PORTABLE LIFTER

INSTRUCTION BOOK

CE

MODEL

CM-270H1

CM-340H1

CM-520H1

SAFETY

To maintain the operation safety, make sure read and understand this instruction book BEFORE operating this equipment.

K.S.F.

EC Declaration of Conformity

According to the following EU Directives:

- Machinery Directive: 2006/42/EC
- Low Voltage Directive: 2006/95/EC
- Electromagnetic Compatibility Directive: 2004/108/EC

We, **Kou Sheng Feng Co., Ltd.**

Add: No. 36, Chi Shi Rd., Pai Dong Le, Tongshiao, Miaole 357, Taiwan, R.O.C.
Tel: +886-37-791993 Fax: +886-37-793877

declare that the machines mentioned hereafter:

◎Product : Portable Lifter
◎Model No.(s) : CM-270H1, CM-340H1, CM-520H1, GLS-340, GLS-520, CA-500
◎Serial No. :
◎Functions : They are designed and manufactured to be used for heavy load lifting.

They are designed and manufactured in compliance with the essential health and safety requirements of the Machinery Directive, Low Voltage Directive and Electromagnetic Compatibility Directive, and are based on the following European harmonized standards:

- EN 1494:2000+A1:2008, Mobile or movable jacks and associated lifting equipment
- EN ISO 12100-1:2003+A1:2009, Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology
- EN ISO 12100-2:2003+A1:2009, Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles
- EN ISO 14121-1:2007, Safety of machinery - Risk assessment Part 1: Principles
- ISO/TR 14121-2:2007, Safety of machinery - Risk assessment Part 2: Practical guidance examples of methods
- EN 60204-32:2008, Safety of machinery - Electrical equipment of machines - Part 32: Requirements for hoisting machines
- EN 55011:2007, Electromagnetic compatibility - Industrial, scientific and medical (ISM) radio-frequency equipment- Radio disturbance characteristics- Limits and methods of measurement
- EN 61000-4-2:2009, Electrostatic discharge (ESD)
- EN 61000-4-4:2004, Electrical fast transient/burst requirements (EFT/Burst)
- EN 61000-4-6:2009, Immunity to conducted disturbances, induced by radio-frequency fields (CS)

Representative : *Huang Yu Ta / R&D Manager*

Place / Date : *Miaole, Taiwan / Mar. 15, 2010.*

"Original instructions"

WARNING SYMBOL

To maintain the operation safety of this machine, the user shall read the included cautions in this manual very carefully to make sure of your personal safety, and to protect the equipment itself from damage. The cautions in the equipment will be indicated by the safety marks. The individual safety marks are as the follows.

	SYMBOL	WARNING
1.	Danger of High Voltage	Electric Shock Danger.
2.	Danger of Belt Drive	Danger of limbs and/or clothing drawn into the machine. Do not touch this area during operation of the machine.
3.	Don't Touch In operation	Warning for Danger of Hand Injury. Do not touch this area during operation of the machine.
4.	Emergency Stop Push Button	Emergency Stop Push Button. When the danger occurs, press this button. The machine will stop immediately.

Please check your machine for these warning symbols and ensure they are kept visible and clearly readable.

Failure to follow the instructions and safety precautions could result in serious equipment damage, serious personal injury and/or death.

If the warning symbols have been damaged or have come off the machine, ensure they are replaced immediately.

If there is any condition of taking off or damage, assure to change it at once.

Qualified Personnel

Only the qualified personnel is allowed to install and use this equipment.
The qualified personnel is authorized to move, install and operate the machinery according to the setup Safety Practice and Standard.

Correct Usage

This equipment only can be used by the methods described in the Specification List of this Index. This equipment can be operated correctly and safely only under the careful and right operation and maintenance.

Reference Scope

CE European Low Voltage Standard (73/23/EEC)

CE European Machinery Safety Standard (98/37/EC)

CE European EMC Standard (89/336/EEC)

Responsibility Statement

In order to agree with the Hardware and Software explained in this manual, we have verified the content of this manual carefully, but, it is not possible to understand all the differences. Thus, we cannot guarantee to meet with the standards for all of them. Meanwhile, the information in this manual, we will examine it periodically and add continuously and verify the necessary information. Any suggestion to improve it will be very much welcome.

We are very appreciated for your adopting CM Series of Portable Lifter. Our company is the team insisted in High Quality and Excellent Technology to manufacture all types of professional equipment to help the customers to create high profits and high quality products.

CM Series Portable Lifts are the professional equipments to install, position and lifting:

.Electric Curly Doors.
.Pipe Equipment of Freezing
.Air Conditioners
.Water Freezers
.Single Gun
.Double-Gun or Triple-Gun Projectors
.High Up Cameras
.Housewares
.Iron Racks
.Air Coolers,
.Indoor Machinery
.Large Screen
.Water and Electricity Equipment
.Overhead TV equipment
.Lighting

1. Telescoping Mast: constructed from heat treated, extruded aluminum, compact, safety, strength and reliability.
2. Set-Up without tools: The LEGS can be release or fold out in seconds.
3. Telescoping legs: Versatile and infinitely adjustable, available use in uneven ground, for example, stairway.
4. Electric remote control with variable speed switch, it can be used in soft start.
5. Emergency Stop Button: press the button for stop raising or lowering immediately.
6. Automatic Overload Breaker is equipped to prevent of over weight loading.
7. Level: equip with the Level inside the cylinder to ensure the proper set up.
8. CM-520H1 equipped with swivel /lock with break caster, make it easy to move to next work position.
9. Platform: Special design for install the window type of Air-conditioner. Detaches from the mast.
10. The compact design make it easily for one person to carry it from job to job.
11. Special design can let you working close to the wall.

INDEX

1. PRECAUTIONS & WARNING---------- 6
2. TRANSPORTING THE PORTABLE LIFTER---------- 9
3. STORAGE---------- 9
4. CHECK ---------- 10
5. LEGEND ---------- 11
6. SET UP ---------- 12
7. PRE-OPERATION INSPECTION---------- 15
8. RAISING AND LOWERING ---------- 16
9. EMERGENCY STOP BUTTON, MANUALLY ---------- 18
10. DISASSEMBLY ---------- 19
11.ORDINARY EXAMINATION ---------- 20
12. APPENDIX ---------- 21
13. SPARE PART DRAWINGS ---------- 22

1. PRECAUTIONS & WARNING

HAZARDS

This instruction book shall be put in an easily accessible location for all users.
FAILURE TO OBEY THE INSTRUCTIONS AND SAFETY RULES MAY RESULT IN DEATH, SERIOUS INJURY AND PROPERTY DAMAGE.

1. DO NOT use this equipment to life people or as a ladder or step.

2. DO NOT stand under or allow person to stand under the Portable Lifter while it's raising or raised.

3. DO NOT use Portable Lifter with a worn, frayed, kinked or damaged steel cable.

4. Always keep the Portable Lifter away from the high voltage electrical wires.

5. DO NOT move the Portable Lifter while it's in the raised position.

6. DO NOT use the Portable Lifter on a moving surface or vehicle.

7. DO NOT exceed Portable Lifter's load capacity.

8. MAINTAIN a minimum safe distance of 3 meters between the Portable Lifter and people.

9. DO NOT touch the machine if it comes in contact with electrical wires.

10. Use of incorrect power supply will reduce efficiency and cause abnormal operations and damage to the machine.

11. Do not grab the electric power supply cable or steel cable when in use.

12. Keep hands away from the Portable Lifter's folding legs and other potential pinching point.

13. DO NOT lower the load unless the area below is clear of personnel and obstructions.

14. DO NOT place ladder or scaffolding against any part of this unit.

15. No untrained or unauthorized personnel to operate the machine. Proper training and instruction is needed to maintain safe operations.

16. DO NOT disassemble and part of this unit. Contact distributor for assistance.

17. DO NOT use or operate the Portable Lifter for operations outsides of recommended specifications in this instruction book.

18. USE only approved tools on this machine. Use of tools not approved may damage the Portable Lifter and cause danger.

19. PRESS the EMERGENCY STOP BUTTON and TURN OFF the power supply if problems occur during operation. Stop using the machine immediately and contact an authorised repairer.

DANGEROUS WORKING SURROUNDINGS HAZARDS

1.DO NOT operate Portable Lifter in rain, damp surroundings or on wet ground, because of the risk of electric shock.

2.DO NOT operate close to pertroleum products, gas or oil as operation of the motor may cause an explosion. Prevent grease building inside the motor to prevent the motor burning.

3.DO NOT cover the motor's air vent as this is essential for cooling of the motor to avoid electric shock. Do Not insert any metal objects into the vent while motor running.

4.Keep the work space and surroundings clean and tidy. Working in dirty or dark surroundings could cause an accident.

5. DO NOT operate the machine on any unsteady surface. The machine must be kept steady and balanced when in use.

6. DO NOT operate the machine in strong or gusty winds.

7. If the loading objects are over-weight or large, it will reduce the balance of the machine, just as the machine operating under the strong winds. Thus, if the measurement is too large, must keep the load staying in the center of Platform.

8. Prior to use, check the work area for drop-offs, holes, bumps, debris, unstable or slippery surfaces or other possible hazardous conditions.

INCORRECT USAGE OF ELECTRIC CABLE HAZARDS

1. DO NOT grab the electric cable, or pull out it from a power point while the motor is operating. This will avoid short circuiting the motor.

2. Keep the electric cable away from sharp or hot object.

3. If the electric cable is damaged, please stop using it immediately. Have the cable repaired or replaced before operating the Portable Lifter again.

CHECKING BEFORE RAISING

1. Ensure the legs are fixed fastened.

2 . Ensure Portable Lifter is in a safety work area.

3 . Ensure the load object is put in the center of Platform.

4. The Portable Lifter is equipped with Level Device. (Exception Model CM-270H1). Checking if it's in the condition of leveling before raising.

5. Ensure the steel cable is
   A): not worn or frayed.
   B): not derailed and not caught in obstructions.
   C): not hooked by abnormal objects causing unusual friction or possibility of derailing.

6. Ensure the manual handle IS NOT installed in the manual shaft.

7. Ensure the power supply is correct voltage before connecting the machine.

8. Check the work area for overhead obstructions or other possible hazards.

2. TRANSPORTING THE PORTABLE LIFTER

1.The export delivery of the Portable Lifters are used the strong packing and put into the standard carton, and then adopt the proper transportation way to deliver to the appointed place.

2.Do not throwing the machine heavily or put the heavy objects on the machine while transport. When piling up, please go ahead according to the indicated piling numbers marked in carton.

3.If this machine will not be operated promptly, please keep it in the proper storage place. As for the storage condition, please refer to the paragraph of Storage in this manual.

3. STORAGE

1. Storage temperature: -5к - 45к .
   Humidity control : 90% within non-dewing

2. The Portable Lifter should be stored on a flat surface. DO NOT place heavy objects on it. If stacking, please handle it according to the instructions on the outer carton.

3. The Portable Lifter must be stored in an area with no vibration or risk of the machine being knocked or damaged.

4. All spare parts should be stored with the unit.

5. Children should not have access to the area where the Portable Lifter is stored.

6. Limited Time for Storage : During delivery of the Portable Lifter is carefully protected. To avoid the metal rusting or any parts defected during transportation or storage, we suggest the unit should only be stored for up to one year prior to use. If it planned to be stored for longer than one year special treatments should be undertaken.

4.CHECK

A strict machinery function test and quality control are undertaken prior to delivery of the Portable Lifter. Upon receipt please check according to the following procedures.

1. Checking if the model No. is correct. Checking the name plate, model number and motor specification are correct.

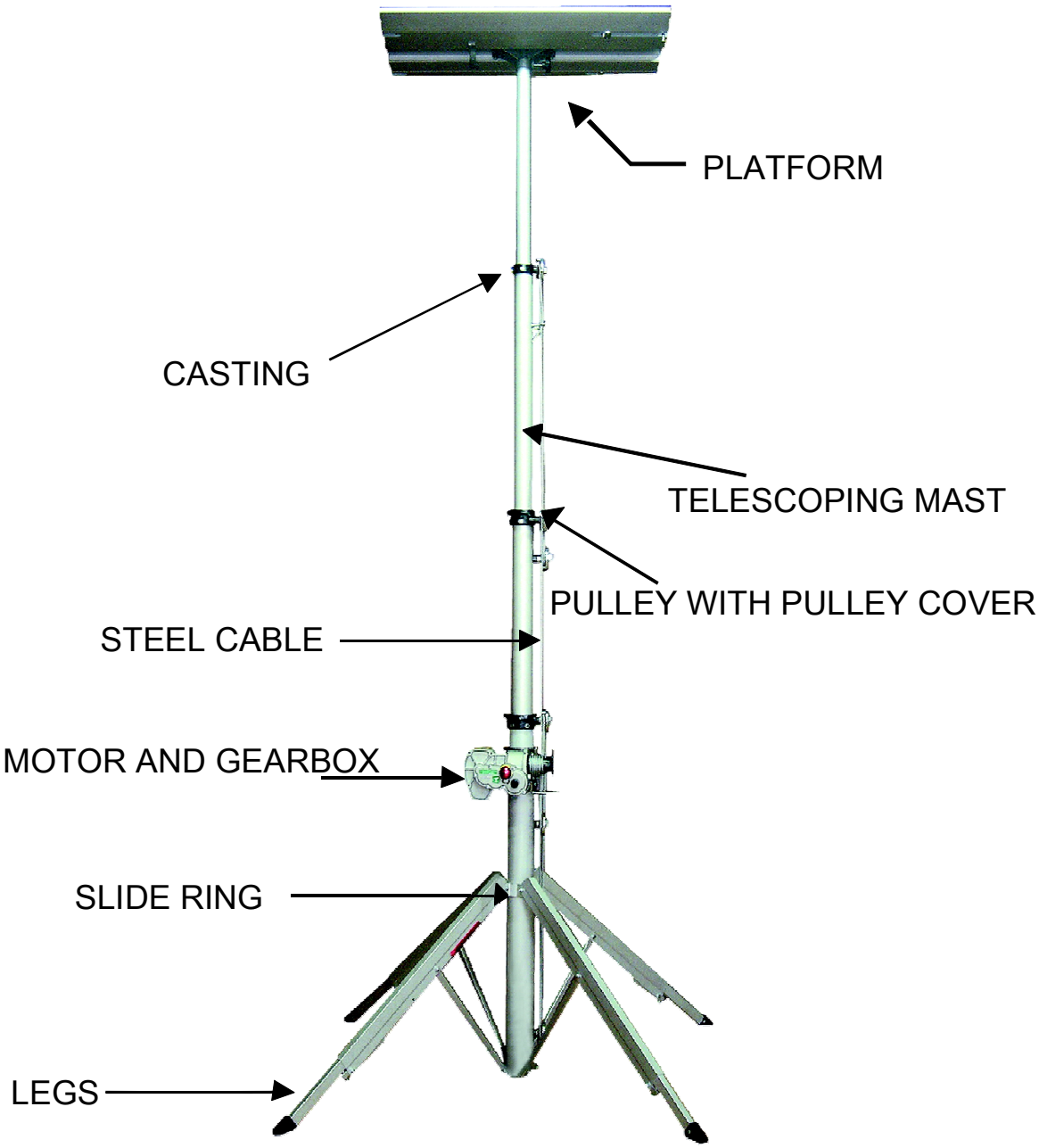
2. Checking if any damage has occurred during transportation.

3. Check all necessary tools have been included.

4. Put all the spare parts in safe place.

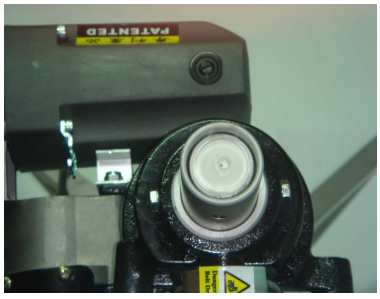
5. Record the results of the working of check.

5. LEGEND


PLATFORM
CASTING
TELESCOPING MAST
PULLEY WITH PULLEY COVER
STEEL CABLE
MOTOR AND GEARBOX
SLIDE RING
LEGS

6. SET UP

1. Take off the belt mounted on the mast.
2. Loosen the screw of Slide Ring and expending the LEGS.
3. Tighten the screw of Slide Ring.



4. Squeeze the TRIGGER as shown by your hand to sliding the telescoping LEG out. (Only Model CM-340H1, CM-520H1have this function.) Extending 4 LEGS until reach the ground.

5. Model CM-340H1, CM-520H1 equipped with the LEVEL, make sure the machine is set up in level status.

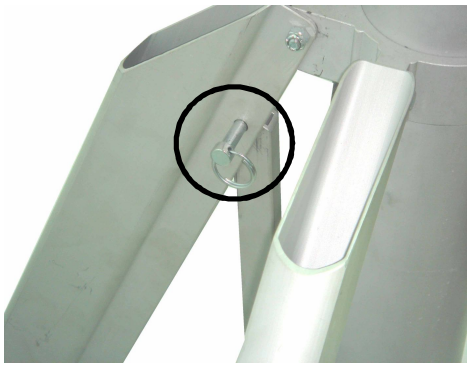
6. Model CM-340H1, CM-520H1 equipped with the telescope feet. You can use it on stair way as shown.
   MAKE SURE SET IT IN LEVEL STATUS.

7. Put the Platform on and tighten the screw below to fixed it. Take off the belt and unfold the platform.

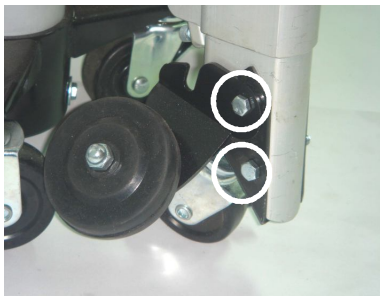
8. OPTIONAL FUNCTION:
   MODEL: CM-340H1 have optional function to work against the wall.

9. OPTIONAL FUNCTION FOR CM 520H1 :

CM-520H1 have optional function for work against the wall.
Shift the pin from the forth leg to lock the higher pin hole for working against the wall.



10. Transportation wheels of CM-520H1, Set up the transportation wheels as follow instruction.



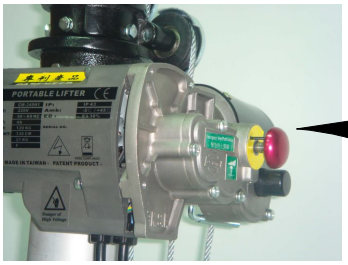
7. Pre-operation Inspection

1. Check before operation

1-1 Before plugging, please make sure the voltage is right.

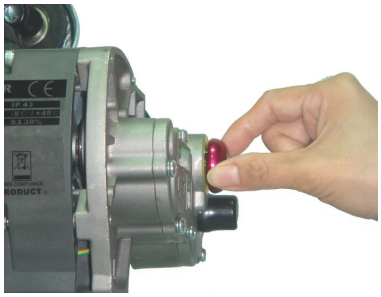
1-2 BEFORE RAISING, PLEASE MAKE SURE THE ATTACHED MANUAL HANDLE IS NOT SET IN MANUAL SHAFT.

1-3 BEFORE RAISING, PLEASE MAKE SURE EMERGENCY STOP BUTTON IS COMPLETELY PULLED UP AS SHOWN, IF NOT, THE MOTOR IS RUNNING BUT THE MAST CAN NOT BE RAISING, JUST LIKE OPERATE IN MANUALLY.



YES!! RIGHT!!

EMERGENCY STOP BUTTON IS COMPLETELY PULLED UP



1-4 IF EMERGENCY STOP BUTTON CAN NOT BE PULLED UP, YOU MAY PRESS THE TRIGGER OF THE SWITCH BOX SLIGHTLY AS SOFT START WITH YOUR RIGHT HAND, AND TWIST THE EMERGENCY STOP BUTTON A LITTLE BIT WITH YOUR LEFT HAND AS SHOWN, THEN PULL IT UP. This is not damaged, it because the gear in the gear box is engaged.

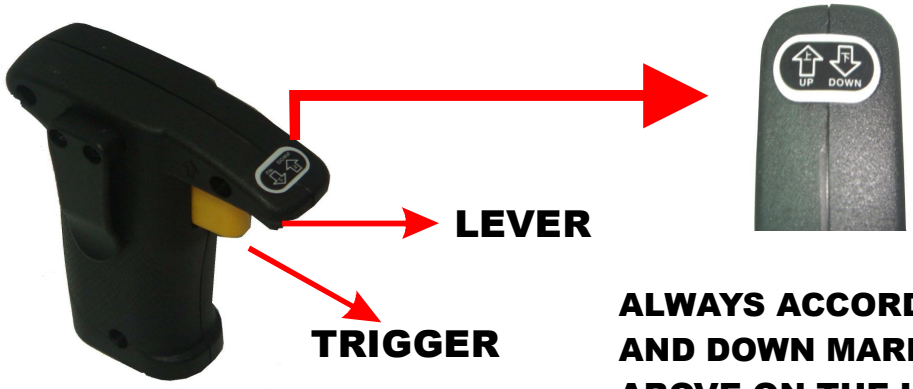
2. Function Test

2-1 The function of Motor is normal or not.

2-2 The function of raising and lowering is normal or not.

2-3 If Feet is equipped with telescopic, (MODEL CM-340H1,CM-520H1), test it is normal or not.

8. RAISING AND LOWERING



ALWAYS ACCORDING THE UP AND DOWN MARK AS SHOWN ABOVE ON THE HANDLE BOX TO OPERATING RAISING OR LOWERING.

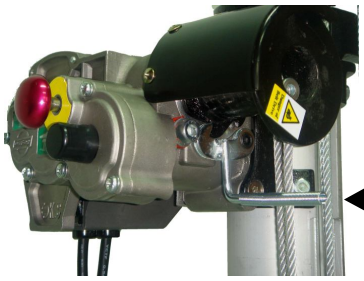
1. **RAISING:** Shift the LEVER to UP mark side of the switch box and press the TRIGGER to raising.

2. **LOWERING:** Shift the LEVER to DOWN mark side of the switch box and press the TRIGGER to lowering.

3. The switch is variable speed control, press TRIGGER slightly can be soft start. Press TRIGGER deeper for raising or lowering faster.

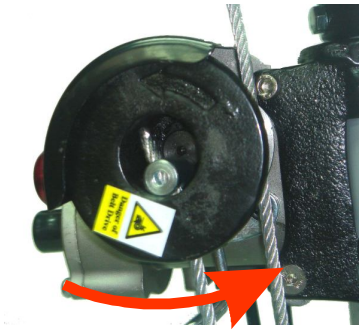
!! WARNING!!

AFTER FULL LOWERING, MAKE SURE TO SHIFT THE LEVER TO UP MARKED OF THE HANDLE BOX BEFORE RAISING. If you did not shift the LEVER to UP marked but still operating raise, will occur sound of " Da, Da, Da" which Anti-Revise device stop raising.
Follow the Mark of UP-DOWN sign for operating.



ANTI - REVERSE DEVICE

!! IMPORTANT !!



YES!! RIGHT!!

NO!! WRONG!!

THE AUTOMATIC OVERLOAD BREAKER STARTED IS SOUND LIKE " DA. DA. DA. DA", AND THE PORTABLE LIFTER WILL STOP RAISING AT ONCE EVEN THE MACHINE IS NOT REACH THE TOP.

In this situation, check the LEVER at first. If the LEVER is not at the UP side position, shift it to the UP side and the machine will lowering. After lowered, keep the LEVER at the UP side, and operating raising once again. Or you can use manually to operate it lowering as well.

IT'S VERY IMPORTANT TO MAKE SURE IF THE LEVER IS SHIFTED TO THE UP SIDE BEFORE RAISING.

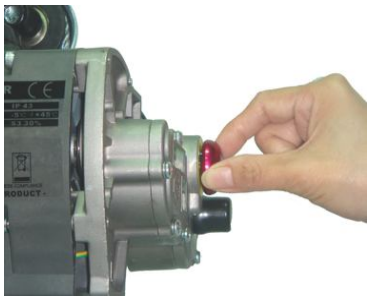
9. EMERGENCY STOP BUTTON , MANUALLY

1. When the unexpect situation is happening, press the emergency stop button, the machine will stop raising or lowering immediately.

2. Manually: Mounted the manual handle on and rotate it raising or lowering.

WARNING!!

When operation in manual, operator must be squatting below the basic height of Portable Lifter.



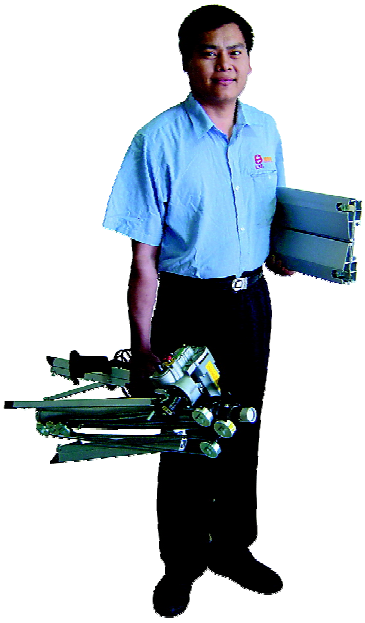
3. Pull the Emergency Stop Button up to operating in electrically.

IF EMERGENCY STOP BUTTON CAN NOT BE PULLED UP, YOU MAY PRESS THE TRIGGER OF THE SWITCH BOX SLIGHTLY AS SOFT START WITH YOUR RIGHT HAND, AND TWIST THE EMERGENCY STOP BUTTON A LITTLE BIT WITH YOUR LEFT HAND AS SHOWN, THEN PULL IT UP.
This is not damaged, it because the gear in the gear box is engaged.

10. DISASSEMBLY

1. Fold the platform and put the belt on.

2. Loosen the screw below the platform and lift the platform off the cylinder.



3. Loosen the screw of the Slide Ring and fold the LEGS up, then fasten the screw of the Slide Ring back.

11. ORDINARY EXAMINATION

No.	POSITION	ITEMS	TOOLS	RESULT	RESOLUTION
1.	Telescoping Mast	Lubrication	1. Check the mast is Lubricated or not. 2. Brush, Normal Engine Oil	Because of the usage of machine, it will be covered with dust or dirt. So, to avoid the Stuck of cylinder and can not raising. Machine must be kept in proper lubrication.	Grease Engine oil on the cylinder by brush
2.	Steel Cable	Tearing or frayed.	Check Steel Wire has been Torn off or other abnormal condition or not.	Steel Cable been tearing or frayed.	

1.When The Spare Part is out of order

When you find there is the abnormal condition happened to the Portable Lifter, or the spare part is broken and wish it to be replaced, you Must contact the manufacturer to repair it. Do not purchase the spare Part and replace it by yourselves.

2. Consulting Service

If you have any problems of operation and disorder about Portable Lifter, please contact the distributor. Our professional personnel will be of service to you.

3. Handling of Discarding

If the Portable Lifter is damaged to be total disruption, please hand over this machine to the professional Recycling Institution to handle it.

4. Tool Usage

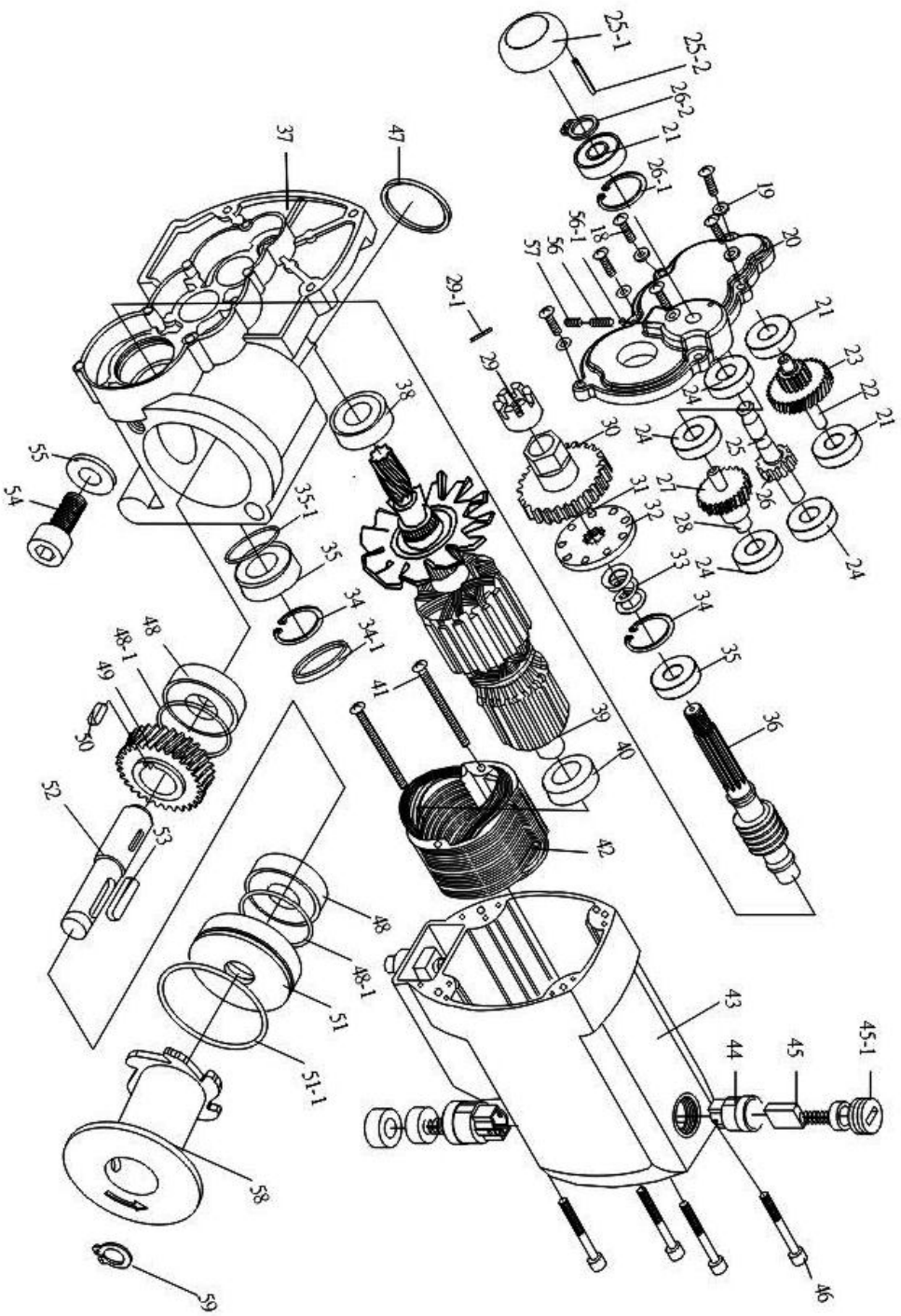
Tools equipped in the machine : one piece of Manual Handle.

12. APPENDIX

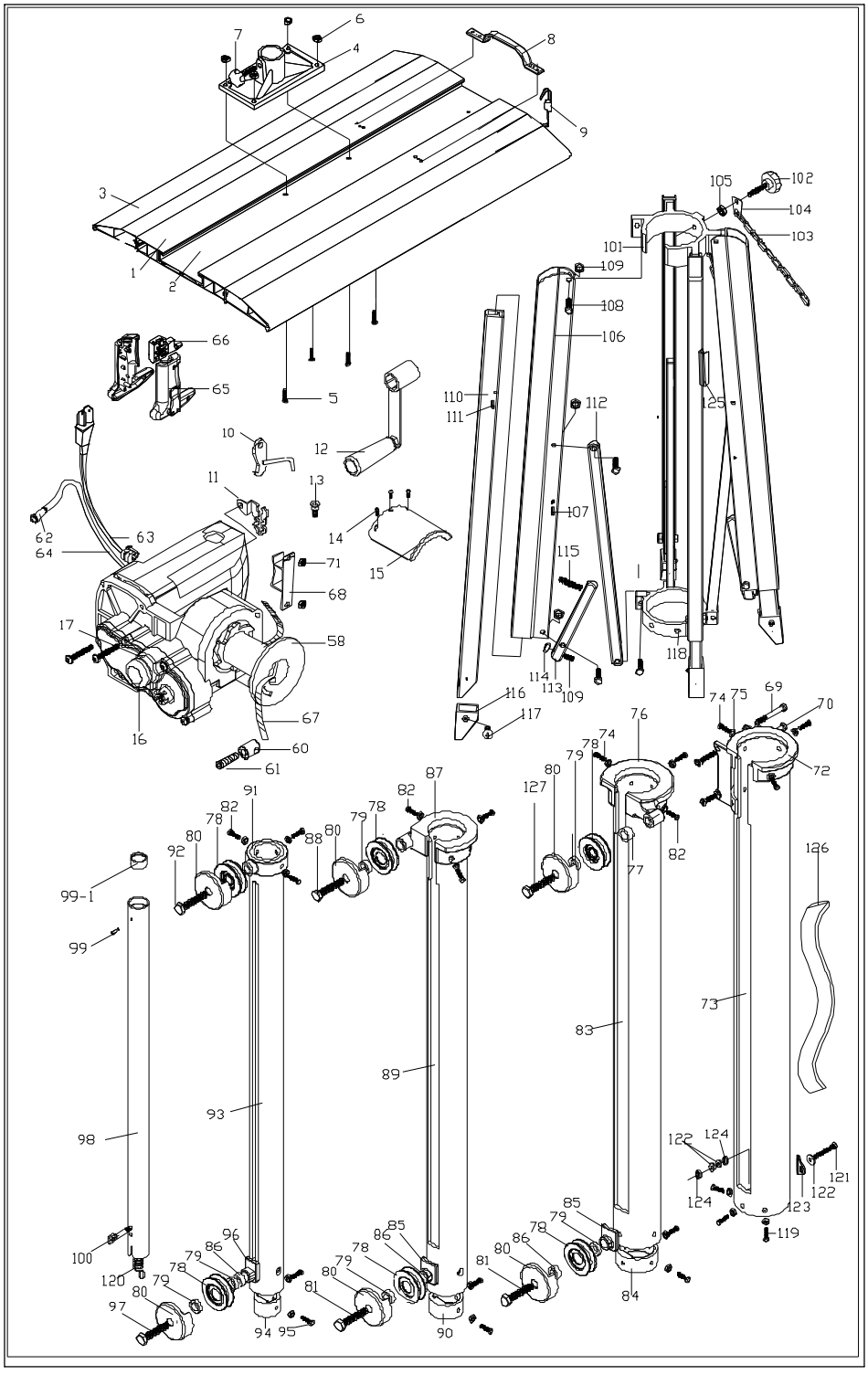
Specification

Specification \ Model		CM-270H1	CM-340H1	CM-520H1
Voltage		110V Or 220V		
Current		110V-8A , 220V-4A		
Load Weight		120KGS	120KGS	3.5M↑ 90KGS 3.5M↓120 KGS
Weight	Body	14.2KGS	21KGS	37.5KGS
	Platform	5.3KGS		
Height	Basic Height	85CM	95CM	105CM
	Lifting Height	270CM	340CM	500CM
Length-Width	Store	15*15CM	30*30CM	38*38CM
	Operating	99*99CM	152.5*152.5CM	198.5*198.5CM
Length of Control Wire		2.7M	3.4M	5M
Length of Electric Wire		2.7M		
Operation Method		Electricity		

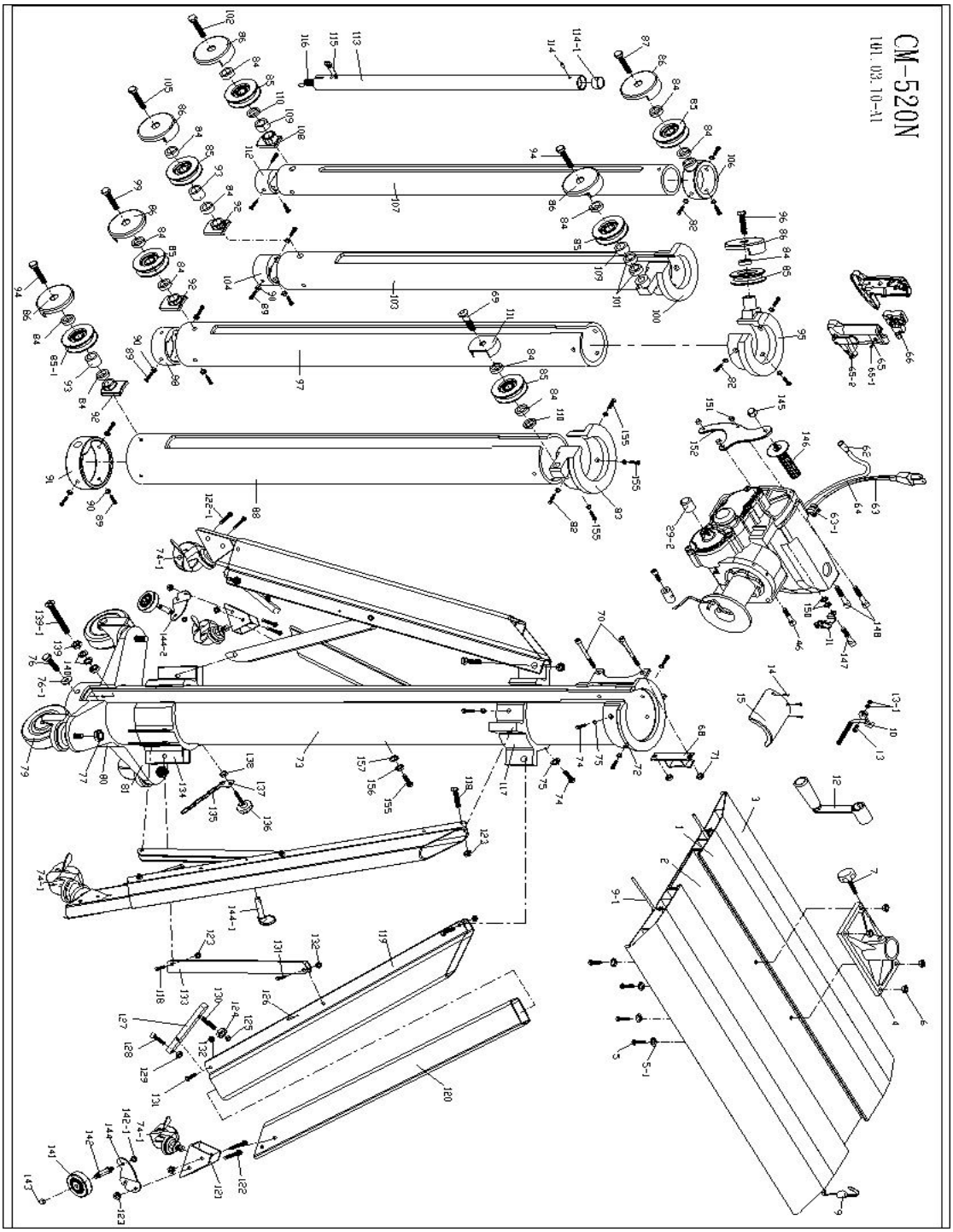
13. Explode View of Motor and Gearbox



Explode View of CM-340H1



Explode View of CM-520H1



◎2009.07 / Copyright by KSF.